

Nordic Electric Bus Initiatives

Jointly organised by



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Nordic Energy Research



**Forum for
transport innovation**

Introduction

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Nordic Electric Bus Initiatives

Svend Søyland, Senior Adviser, Nordic Energy Research

Lindholmen Science Park, Gothenburg, Sweden on September 1-2, 2015



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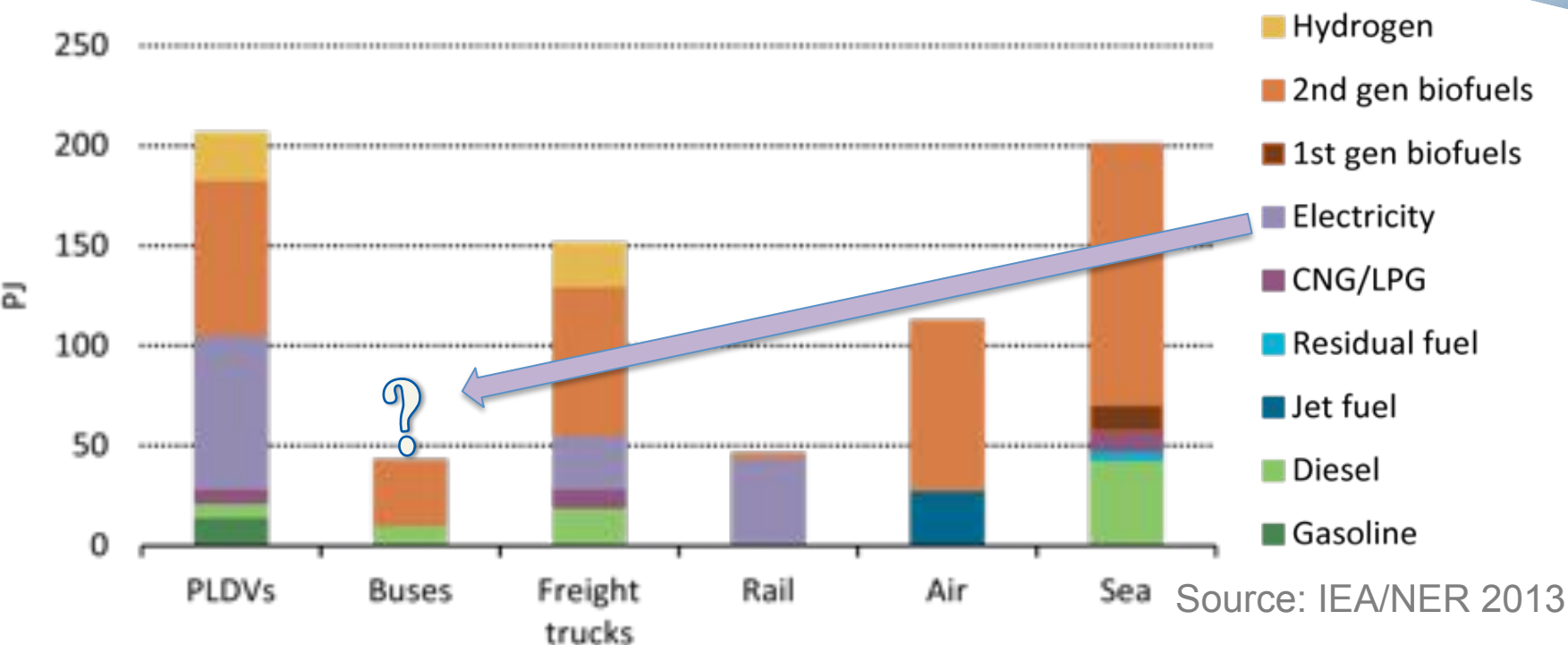
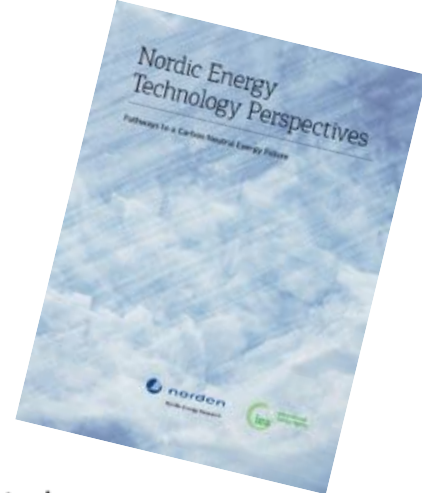
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The Nordic transport challenge towards 2050

The Nordic ETP Carbon-Neutral Scenario



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The aim of the event

1. Share best practices from cases where electric buses have been implemented.
2. Share general knowledge regarding the potential of electrification of buses for public transport.
3. Share expectations and address common issues/hurdles on how public transport authorities can navigate the technology shift.
4. Connect and network Nordic representatives and stakeholders that either have experiences from the field or plan to adopt new technologies.
5. Strengthen Nordic collaboration.

NER – in brief

- Platform for cooperative energy research and policy development under the Nordic Council of Ministers
- Nordic cooperation in energy research started 1975, established as an institution under the Nordic Council of Ministers in 1999.
- Located in Oslo, 12 professional staff.



NER Strategy 2015-2018

- Build research cooperation and competencies within the development of sustainable energy solutions.
- Provide research-based analytical support to energy technology decision-making.
- Enhance the knowledge base for increased competitiveness of the Nordic energy system and disseminate Nordic sustainable energy solutions.

Some objectives of the Forum for transport innovation

- Seek to increase collaboration across sector boundaries.
- Develop collaboration between the different stakeholders of the research and innovation system, to ensure that results are more rapidly put to practical use.
- Work for strong representation at the international level.
- Develop infrastructure and organisational arrangements for trial and demonstration areas.
- Promote innovation in regulations, legislation, standards and procurement.

Nordic Energy and Transport Programme

Projects

- 2010: Electric Transportation Portfolio
 - (6 projects, total budget 18,2 mNOK)
- 2011: Sustainable Freight
 - (6 projects, total budget 41,1 mNOK)

Establishment of Nordic Energy and Transport Platform



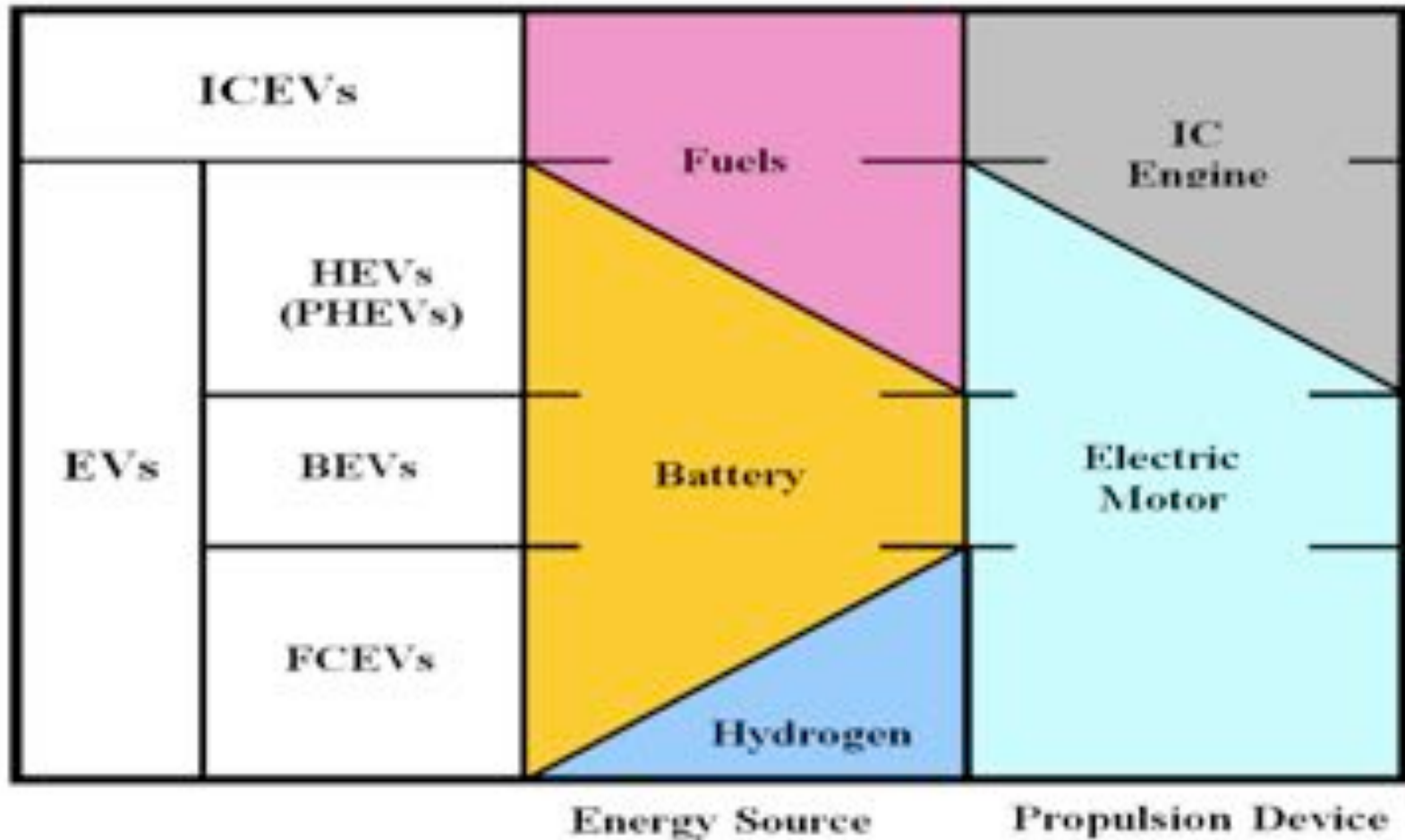
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ICEV, PEHV, BEV, FCEV?



Source: Zivanovic and Nicololic .2012



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Plug-in hybrid electric (PHEV)



(Source: www.insideevs.com)



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Fuel cell buses (FCEV)



(Source: www.vanhool.be)



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325 km on one charge!



(Source: cleantechnica.com)



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BEVs in cold winters



(Source: www.ebusco.eu)



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Programme overview

Day 1

- Showcases
 - Copenhagen, Helsinki, Stavanger, Gothenburg
- Ongoing and Planned projects
 - Electric Buses, plug-in hybrids
- How to enable Nordic Cooperation?
- Site-visit: ElectriCity indoor bus stop



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Main topic: Nordic co-operation

1 topic free of choice

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Choose one of the below topics:

- Integrating EVs in City Planning
- Charging infrastructure
- Procurement/Tender



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Programme overview cont.

Day 2

- Experiences with Charging Infrastructure
 - Copenhagen, Helsinki, Stavanger, Gothenborg
- Planning and Strategy
 - Fossil Free 2020, Ruter Oslo Norway
 - Migration to electric buses in Stockholm
- Policy frameworks and Business models
- Wrap-up - conclusions

Practical Information

- In case of emergency....
- Wi-Fi password:
- Dinner tonight:
- Presentations will be uploaded to NER website



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Questions?



(Source: www.bt.no)



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